

GenCore version 5.1.16
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: February 1, 2005, 14:15:38 ; Search time 166 Seconds
(without alignments)
522.967 Million cell updates/sec

Title: US-10-629-329A-2
Perfect score: 1322
Sequence: 1 MSGCDAGSGDCSRCAQD.....SMKKVGLDPSQLPVGENGIV 242

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2002273 seqs, 358729299 residues

Total number of hits satisfying chosen parameters: 2002273

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

- Database : A: Genesep23sep04:.*
1: Genesep1980s:.*
2: Genesep1990s:.*
3: Genesep2000s:.*
4: Genesep2001s:.*
5: Genesep2002s:.*
6: Genesep2003as:.*
7: Genesep2003bs:.*
8: Genesep2004s:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | DB ID | Description |
|------------|--------|-------------|--------|-------|--------------------|
| 1 | 1322 | 100.0 | 242 | 8 | ADJ62654 Human ran |
| 2 | 1314 | 99.4 | 242 | 5 | Aau78360 Cell diff |
| 3 | 1307 | 98.9 | 242 | 4 | AAG67127 Amino aci |
| 4 | 1296 | 98.0 | 242 | 2 | Aaw94762 Amino aci |
| 5 | 1296 | 98.0 | 242 | 4 | Aay85636 Antigen r |
| 6 | 1296 | 98.0 | 242 | 5 | Aau77178 Human G-C |
| 7 | 1239.5 | 93.8 | 241 | 4 | Aay85635 Antigen r |
| 8 | 1239.5 | 93.8 | 241 | 5 | Aau77177 Murine G- |
| 9 | 1239.5 | 93.8 | 241 | 5 | Aau78361 Cell diff |
| 10 | 1239.5 | 93.8 | 241 | 8 | ADJ62656 Mouse ran |
| 11 | 790 | 59.8 | 227 | 4 | ABb65485 Drosophil |
| 12 | 312 | 23.6 | 64 | 8 | ABO55349 Human gen |
| 13 | 273.5 | 20.7 | 129 | 4 | AAO10783 Human poi |
| 14 | 228 | 17.2 | 59 | 4 | AAG74374 Human col |
| 15 | 195 | 14.8 | 212 | 6 | ABU17451 Protein e |
| 16 | 193 | 14.6 | 204 | 6 | ABU41912 Protein e |
| 17 | 182 | 13.8 | 204 | 6 | ABU27936 Protein e |
| 18 | 168.5 | 12.7 | 238 | 7 | ABO81414 Pseudomon |
| 19 | 166 | 12.6 | 205 | 6 | ABU15639 Protein e |
| 20 | 149 | 11.3 | 205 | 7 | ABO66904 Klebsiell |
| 21 | 142 | 10.7 | 227 | 6 | ABU02540 S. pneumo |
| 22 | 140 | 10.6 | 202 | 6 | ABU31958 Protein e |
| 23 | 137 | 10.4 | 234 | 6 | ABU46266 Protein e |
| 24 | 137 | 10.4 | 238 | 3 | Aay70730 Klebsiell |
| 25 | 136.5 | 10.3 | 220 | 6 | ABU21860 Protein e |

| | | | | | | |
|----|-------|------|-----|---|----------|--------------------|
| 26 | 136 | 10.3 | 234 | 8 | ADK48234 | Adk48234 Streptoco |
| 27 | 135 | 10.2 | 190 | 7 | ADM26579 | Adm26579 Hyperther |
| 28 | 133.5 | 10.1 | 234 | 5 | ABP27712 | Abp27712 Streptoco |
| 29 | 133.5 | 10.1 | 234 | 6 | ABU46430 | Abu46430 Protein e |
| 30 | 132 | 10.0 | 228 | 6 | ABU47361 | Abu47361 Protein e |
| 31 | 131 | 9.9 | 181 | 6 | ABU18884 | Abu18884 Protein e |
| 32 | 131 | 9.9 | 228 | 6 | ABU48206 | Abu48206 Protein e |
| 33 | 130 | 9.8 | 241 | 7 | ADC94690 | Adc94690 E. faeciu |
| 34 | 129.5 | 9.8 | 230 | 5 | ABP65425 | Abp65425 Bifidobac |
| 35 | 129 | 9.8 | 228 | 6 | ABU28874 | Abu28874 Protein e |
| 36 | 128.5 | 9.7 | 231 | 6 | ABU49976 | Abu49976 Protein e |
| 37 | 127.5 | 9.6 | 232 | 6 | ABU29712 | Abu29712 Protein e |
| 38 | 127.5 | 9.6 | 233 | 7 | ADC95935 | Adc95935 E. faeciu |
| 39 | 127 | 9.6 | 230 | 6 | ABU49674 | Abu49674 Protein e |
| 40 | 126 | 9.5 | 242 | 2 | AAW22376 | Aaw22376 S. pneumo |
| 41 | 126 | 9.5 | 242 | 8 | ADK47774 | Adk47774 Streptoco |
| 42 | 125.5 | 9.5 | 236 | 6 | ABU29217 | Abu29217 Protein e |
| 43 | 125.5 | 9.5 | 241 | 7 | ADH88180 | Adh88180 Enterococ |
| 44 | 122.5 | 9.3 | 228 | 6 | ABU25094 | Abu25094 Protein e |
| 45 | 122 | 9.2 | 222 | 8 | ADN47255 | Adn47255 Thermococ |

ALIGNMENTS

RESULT 1
ADJ62654
ID ADJ62654 standard; protein; 242 AA.

XX ADJ62654;

XX 06-MAY-2004 (first entry)

XX Human rank-associated inhibitor (RAIN) protein SEQ ID NO:2.

XX rank-associated inhibitor; RAIN protein;

XX osteoclast precursor cell fusion inhibitor; osteopathic; bone loss;

XX human; chromosome 11.

XX Homo sapiens.

XX WO2004011620-A2.

XX 05-FEB-2004.

XX 29-JUL-2003; 2003WO-US023801.

XX 29-JUL-2002; 2002US-0399205P.

XX (TEXA) UNIV TEXAS SYSTEM.

XX Darnay BG;

XX WPI: 2004-143848/14.

XX N-PSDB; ADJ62653.

XX New isolated Rank-Associated Inhibitor (RAIN) polypeptides, useful for

XX treating a subject with bone loss by inhibiting osteoclast precursor cell

XX fusion.

XX Claim 1; SEQ ID NO 2; 97pp; English.

XX The present invention describes an isolated polypeptide containing at least 10 contiguous amino acids of a rank-associated inhibitor (RAIN) protein. Also described: (1) an isolated polynucleotide comprising a nucleic acid encoding a RAIN polypeptide; (2) a method of treating a subject with bone loss comprising inhibiting osteoclast precursor cell fusion by administering a RAIN polypeptide to modulate RANK signaling, or an expression vector comprising the polynucleotide under the transcriptional control of a promoter; (3) a method for inhibiting osteoclast precursor cell fusion by contacting an osteoclast precursor cell with an expression vector that expresses a RAIN polypeptide; and (4) a method for identifying a modulator of an osteoclast precursor fusion by

CC providing a cell deficient in a RAIN polypeptide; contacting the cell
CC with a candidate substance; and comparing osteoclast cell fusion observed
CC when the candidate substance is not added, where the alteration in
CC osteoclast cell fusion indicates that the candidate substance is a
CC modulator of an osteoclast cell fusion. RAIN sequences have osteopathic
CC activities, and can be used for inhibiting osteoclast precursor cell
CC fusion. The RAIN polypeptide, expression vector and methods are useful
CC for treating a subject with bone loss. The present sequence represents
CC human RAIN, which is used in the exemplification of the present
CC invention. The human RAIN gene is located on chromosome 11, more
CC specifically to 11p12-13.

XX Sequence 242 AA;

SQ Query Match 100.0%; Score 1322; DB 8; Length 242;
Best Local Similarity 100.0%; Pred. No. 3.1e-137;
Matches 242; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MSGCDAGGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
DB |||||
1 MSGCDAGGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
QY 61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFNNAYTMRGAGAVIHTHNSKA 120
DB |||||
61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFNNAYTMRGAGAVIHTHNSKA 120
QY 121 AVMATLLFPGRPFKITHQEMIKGICKTSGGYRYDDMLVPIIENTPPEEKLKDRMAHA 180
DB |||||
121 AVMATLLFPGRPFKITHQEMIKGICKTSGGYRYDDMLVPIIENTPPEEKLKDRMAHA 180
QY 181 MNEYPDSCAVLVRHGVYVWGTEWKAATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
DB |||||
181 MNEYPDSCAVLVRHGVYVWGTEWKAATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
QY 241 IV 242
DB |||||
241 IV 242

RESULT 2
AAU78360
ID AAU78360 standard; protein; 242 AA.

AC AAU78360;

XX 18-JUN-2002 (first entry)

DT Cell differentiation stimulator associated protein #1.

DE Cartilage cell differentiation stimulator; osteopathic;
XX Membrane-bound transferrin-like protein; Mtf-BP; concanavalin A; ConA;
KW Membrane bound type transferrin-like protein; Mtf; cartilage disorder;
KW bone metabolism disease; cell differentiation; cell growth;
KW extracellular matrix related disease; human.

XX Homo sapiens.

XX JP2002020311-A.

XX 23-JAN-2002.

XX 07-JUL-2000; 2000JP-00206566.

XX 07-JUL-2000; 2000JP-00206566.

XX (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN.

XX WPI; 2002-287405/33.

XX N-PSDB; ABK12566.

XX A cartilage cell differentiation stimulator useful in the diagnosis of
FT biophylaxis, cell differentiation, cell growth and construction of
FT extracellular matrix related diseases.

XX Claim 2; Page 8-9; 17pp; Japanese.

PS The invention describes a cartilage cell differentiation stimulator
XX (containing a membrane-bound transferrin-like protein (MTf-BP) and a
CC membrane bound type transferrin-like protein (MTf)) and an animal-derived
CC concanavalin-like drug. The cartilage differentiation stimulator can be
CC used in diagnosis, prevention and treatment of cartilage and bone
CC metabolism diseases. They can also be used for diagnosing biophylaxis,
CC cell differentiation, cell growth and construction of extracellular
CC matrix related diseases. MTF-BP strongly stimulates differentiation of
CC cartilage cells and exhibits similar action mechanism with that of plant
CC derived ConA. This is the amino acid sequence of a cartilage cell
CC differentiation stimulator associated polypeptide described in the
CC invention

XX Sequence 242 AA;

SQ Query Match 99.4%; Score 1314; DB 5; Length 242;
Best Local Similarity 99.6%; Pred. No. 2.4e-136;
Matches 241; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MSGCDAGGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
DB |||||
1 MSGCDAGGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
QY 61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFNNAYTMRGAGAVIHTHNSKA 120
DB |||||
61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFNNAYTMRGAGAVIHTHNSKA 120
QY 121 AVMATLLFPGRPFKITHQEMIKGICKTSGGYRYDDMLVPIIENTPPEEKLKDRMAHA 180
DB |||||
121 AVMATLLFPGRPFKITHQEMIKGICKTSGGYRYDDMLVPIIENTPPEEKLKDRMAHA 180
QY 181 MNEYPDSCAVLVRHGVYVWGTEWKAATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
DB |||||
181 MNEYPDSCAVLVRHGVYVWGTEWKAATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
QY 241 IV 242
DB |||||
241 IV 242

RESULT 3
AAG67127
ID AAG67127 standard; protein; 242 AA.

XX AAG67127;

XX 13-NOV-2001 (first entry)

DT Amino acid sequence of a human enzyme.

DE Human; enzyme; cancer; neurological disorder; epilepsy; stroke;
XX Alzheimer's disease; Pick's disease; Huntington's disease; dementia;
KW multiple sclerosis; Parkinson's disease; amyotrophic lateral sclerosis;
KW meningitis; schizophrenia disorder; neuroskeletal disorder; allergy;
KW Addison's disease; autoimmune disease; anemia; asthma; Crohn's disease;
KW adult respiratory distress syndrome; atopic dermatitis; psoriasis;
KW diabetes mellitus; osteoporosis; pancreatitis; rheumatoid arthritis;
KW infection; genetic disorder; muscular dystrophy; Gaucher's disease;
KW Huntington's chorea; sickle cell anemia; thalassemia; atherosclerosis;
KW Von Willebrand's disease; Wilms' tumour; cell proliferative disorder;
KW leukemia; hepatitis; cirrhosis; arteriosclerosis; gene therapy.

XX Homo sapiens.

XX Location/Qualifiers

XX Key Modified-site 2 /note= "potential phosphorylation site"

XX Modified-site 13 /note= "potential phosphorylation site"

XX Modified-site 49

CC including testicular cancer; anorexia; bulimia; Parkinson's disease;
CC cardiovascular disease including restenosis, atherosclerosis, acute heart
CC failure, myocardial infarction, hypotension, hypertension; urinary
CC retention; angina pectoris; ulcers; benign prostatic hypertrophy; and
CC psychotic and neurological disorders (anxiety, schizophrenia, delirium,
CC manic depression, dementia, severe mental retardation) and dyskinesias,
CC such as Huntington's disease or Gilles de la Tourette's syndrome. The
CC HF12G53 polypeptide is also useful for mapping the gene to a chromosome,
CC allowing gene inheritance to be studied through linkage analysis
XX
SQ Sequence 242 AA;

Query Match 98.0%; Score 1296; DB 2; Length 242;
Best Local Similarity 98.8%; Pred. No. 2.3e-134; Indels 0; Gaps 0;
Matches 239; Conservative 0; Mismatches 3;
QY 1 MSGCDAGEGDCSRRCGAQDKEHPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
DB 1 MSGCDAGEGDCSRRCGAQDKEHPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
QY 61 SGVQKERIQEDMFVCDINEKDISGSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
DB 61 SGVQKERIQEDMFVCDINEKDISGSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
QY 121 AVMATLLPGRREFKITHQEMIKGKCTSGGYRYDDMLVPIIENTPEEKGLKDRMAHA 180
DB 121 AVMATLLPGRREFKITHQEMIKGKCTSGGYRYDDMLVPIIENTPEEKGLKDRMAHA 180
QY 181 MNEYDPSCAVLVRHGVYVWGGETWEKATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
DB 181 MNEYDPSCAVLVRHGVYVWGGETWEKATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
QY 241 IV 242
DB 241 IV 242

RESULT 5
AAU85636
ID AAY85636 standard; protein; 242 AA.
AC AAY85636;
DT 07-FEB-2001 (first entry)
XX Antigen recognised by Ab capable of inducing G-CSF activity.
XX
XX Antigenic protein; antibody; granulocyte colony stimulating factor;
KW G-CSF; cancer therapy; bone marrow suppression; human.
XX
XX Homo sapiens.
XX WO200060075-A1.
XX 12-OCT-2000.
XX 31-MAR-2000; 2000WO-JP002080.
XX
XX 01-APR-1999; 99JP-00095092.
XX (NISR) JAPAN TOBACCO INC.
XX Sha S, Aoki Y, Nishi Y;
XX WPI; 2001-024452/03.
XX N-PSDB; AAC61150.
XX
XX Gene encoding an antigen recognizing an antibody which induces
PT granulocyte colony stimulating factor (G-CSF) expression for gene therapy
PT and treatment of G-CSF associated disorders e.g. the side effects of
PT cancer therapy.
XX
XX Claim 3; Page 52-53; 58pp; Japanese.

XX The present invention relates to a gene encoding an antigenic protein
CC recognised by an antibody or its fragments which can induce the
CC production of granulocyte colony stimulating factor (G-CSF). Also
CC included in the invention are partial sequences of the gene, antibodies
CC recognising all or part of the antigenic protein, expression vectors
CC containing the gene and host cells transformed by the vector. The gene is
CC used for gene therapy, and compounds identified by screening using the
CC gene sequence are used for treatment and prevention of disorders
CC associated with G-CSF expression such as the side effects of cancer
CC therapy (including bone marrow suppression). The present sequence
CC represents the human antigen of the invention
XX
SQ Sequence 242 AA;

Query Match 98.0%; Score 1296; DB 4; Length 242;
Best Local Similarity 98.8%; Pred. No. 2.3e-134; Indels 0; Gaps 0;
Matches 239; Conservative 0; Mismatches 3;
QY 1 MSGCDAGEGDCSRRCGAQDKEHPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
DB 1 MSGCDAGEGDCSRRCGAQDKEHPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
QY 61 SGVQKERIQEDMFVCDINEKDISGSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
DB 61 SGVQKERIQEDMFVCDINEKDISGSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
QY 121 AVMATLLPGRREFKITHQEMIKGKCTSGGYRYDDMLVPIIENTPEEKGLKDRMAHA 180
DB 121 AVMATLLPGRREFKITHQEMIKGKCTSGGYRYDDMLVPIIENTPEEKGLKDRMAHA 180
QY 181 MNEYDPSCAVLVRHGVYVWGGETWEKATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
DB 181 MNEYDPSCAVLVRHGVYVWGGETWEKATMCCEYDYLFDIAVSMKKVGLDPSQLPVGENG 240
QY 241 IV 242
DB 241 IV 242

RESULT 6
AAU77178
ID AAU77178 standard; protein; 242 AA.
AC AAU77178;
DT 02-JUL-2002 (first entry)
XX Human G-CSF-inducible antibody binding protein, MMR19.
XX
XX Human; granulocyte-colony stimulating factor; G-CSF; MMR19;
KW antimicrobial; G-CSF-inducible antibody; neutrophil deficiency disease;
KW infection.
XX
XX Homo sapiens.
XX WO200226978-A1.
XX 04-APR-2002.
XX 27-SEP-2001; 2001WO-JP008446.
XX 27-SEP-2000; 2000JP-00294191.
XX (NISR) JAPAN TOBACCO INC.
XX Sha S, Mukai H, Aoki Y, Nishi Y;
XX WPI; 2002-340016/37.
XX N-PSDB; ABK47967.
XX
XX Gene encoding protein binding to antibody having granulocyte-colony
PT stimulating factor (G-CSF) inducing activity, useful for screening

PT potential drugs treating G-CSF associated diseases.
XX Claim 3; Page 96-97; 103pp; Japanese.
PS
XX
CC The invention relates to a mouse or human gene (MMR19) encoding a protein
CC which binds to antibodies or their fragments which induce granulocyte-
CC colony stimulating factor (G-CSF) secretion. The genes and proteins of
CC the invention are used in diagnosis, treatment and prevention of diseases
CC associated with G-CSF, including infections and neutrophil deficiency
CC disease. This sequence represents a human G-CSF-inducible antibody
CC binding protein, MMR19
XX
SQ Sequence 242 AA;
Query Match 98.0%; Score 1296; DB 5; Length 242;
Best Local Similarity 98.8%; Pred. No. 2.3e-134;
Matches 239; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
QY 1 MSGCDAGEGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGSLKHGDEIYIAP 60
DB 1 MSGCDWEGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGSLKHGDEIYIAP 60
QY 61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
DB 61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
QY 121 AVMATLLPFGREFKITHQEMIKGIKKTSGGYRYDDMLVPIENTPBEKGLKORMAHA 180
DB 121 AVMATLLPFGREFKITHQEMIKGIKKTSGGYRYDDMLVPIENTPBEKGLKORMAHA 180
QY 181 MNEYDPSCAVLVRHGVYVWGETWEKATMCCECYDYLFDAVSMKKVGLDPSQLPVGENG 240
DB 181 MNEYDPSCAVLVRHGVYVWGETWEKATMCCECYDYLFDAVSMKKVGLDPSQLPVGENG 240
QY 241 IV 242
DB 241 IV 242
RESULT 7
AAV85635
ID AAY85635 standard; protein; 241 AA.
AC AAY85635;
XX
XX 07-FEB-2001 (first entry)
DT
DE Antigen recognised by Ab capable of inducing G-CSF activity.
XX
XX Antigenic protein; antibody; granulocyte colony stimulating factor;
KW G-CSF; cancer therapy; bone marrow suppression; mouse.
XX
XX Mus sp.
XX WO200060075-A1.
XX
XX 12-OCT-2000.
XX
XX 31-MAR-2000; 2000WO-JP002080.
XX
XX 01-APR-1999; 99JP-00095092.
XX
XX (NISR) JAPAN TOBACCO INC.
XX
XX Sha S, Aoki Y, Nishi Y;
XX WPI; 2001-024452/03.
XX DR N-PSDB; AAC61149.
XX
XX Gene encoding an antigen recognizing an antibody which induces
PT granulocyte colony stimulating factor (G-CSF) expression for gene therapy
PT and treatment of G-CSF associated disorders e.g. the side effects of
PT cancer therapy.

XX Claim 2; Page 49-50; 58pp; Japanese.
PS
XX
CC The present invention relates to a gene encoding an antigenic protein
CC recognised by an antibody or its fragments which can induce the
CC production of granulocyte colony stimulating factor (G-CSF). Also
CC included in the invention are partial sequences of the gene, antibodies
CC recognising all or part of the antigenic protein, expression vectors
CC containing the gene and host cells transformed by the vector. The gene is
CC used for gene therapy, and compounds identified by screening using the
CC gene sequence are used for treatment and prevention of disorders
CC associated with G-CSF expression such as the side effects of cancer
CC therapy (including bone marrow suppression). The present sequence
CC represents the murine antigen of the invention
XX
SQ Sequence 241 AA;
Query Match 93.8%; Score 1239.5; DB 4; Length 241;
Best Local Similarity 93.8%; Pred. No. 4.1e-128;
Matches 227; Conservative 9; Mismatches 5; Indels 1; Gaps 1;
QY 1 MSGCDAGEGDCSRRCAQDKHEPRYLIPELCKQFYHLGWVTGTGGGSLKHGDEIYIAP 60
DB 1 MSGCQA-QGDCSRRCAQDKHEPRFLIPELCKQFYHLGWVTGTGGGSLKHGNEIYIAP 59
QY 61 SGVQKRIQPEDMFVCDINEKDISGPSPSKLLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
DB 60 SGVQKRIQPEDMFVCDINEQDISGPPASKLLKKSQCTPLFMNAYTMRGAGAVIHTHSA 119
QY 121 AVMATLLPFGREFKITHQEMIKGIKKTSGGYRYDDMLVPIENTPBEKGLKORMAHA 180
DB 120 AVMATLLPFGREFKITHQEMIKGIKKTSGGYRYDDMLVPIENTPBEKGLKORMAHA 179
QY 181 MNEYDPSCAVLVRHGVYVWGETWEKATMCCECYDYLFDAVSMKKVGLDPSQLPVGENG 240
DB 180 MNEYDPSCAVLVRHGVYVWGETWEKATMCCECYDYLFDAVSMKKVGLDPSQLPVGENG 239
QY 241 IV 242
DB 240 IV 241
RESULT 8
AAU77177
ID AAU77177 standard; protein; 241 AA.
AC AAU77177;
XX
XX 02-JUL-2002 (first entry)
DT
DE Murine G-CSF-inducible antibody binding protein, MMR19.
XX
XX Mouse; granulocyte-colony stimulating factor; G-CSF; MMR19;
KW antimicrobial; G-CSF-inducible antibody; neutrophil deficiency disease;
KW infection.
XX
XX Mus sp.
XX WO200226978-A1.
XX
XX 04-APR-2002.
XX
XX 27-SEP-2001; 2001WO-JP008446.
XX
XX 27-SEP-2000; 2000JP-00294191.
XX
XX (NISR) JAPAN TOBACCO INC.
XX
XX Sha S, Mukai H, Aoki Y, Nishi Y;
XX WPI; 2002-340016/37.
XX DR N-PSDB; ABK47966.
XX

PT Gene encoding protein binding to antibody having granulocyte-colony
PT stimulating factor (G-CSF) inducing activity, useful for screening
PT potential drugs treating G-CSF associated diseases.
XX
PS Claim 1; Page 93-94; 103pp; Japanese.
XX
CC The invention relates to a mouse or human gene (MMR19) encoding a protein
CC which binds to antibodies or their fragments which induce granulocyte-
CC colony stimulating factor (G-CSF) secretion. The genes and proteins of
CC the invention are used in diagnosis, treatment and prevention of diseases
CC associated with G-CSF, including infections and neutrophil deficiency
CC disease. This sequence represents a mouse G-CSF-inducible antibody
CC binding protein, MMR19
XX
SQ Sequence 241 AA;
Query Match 93.8%; Score 1239.5; DB 5; Length 241;
Best Local Similarity 93.8%; Pred. No. 4.1e-128;
Matches 227; Conservative 9; Mismatches 5; Indels 1; Gaps 1;
QY 1 MSGCDAGEGDCRRRCGAQDKHEPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
DB 1 MSGCQA-QGDCSRPCGAQDKHEPRFLIPELCKQFYHLGWVTGTGGGISLKHGNEIYIAP 59
QY 61 SGVQKRIQPEDMFVCDINEKDISGPSKSLKKSQCTPLFNNAYTMRGAGAVIHTHSA 120
DB 60 SGVQKRIQPEDMFVCDINEQDISGPPASKKLKKSQCTPLFNNAYTMRGAGAVIHTHSA 119
QY 121 AVMATLLPFGREFKITHQEMIKGIRKCTSGGYRYDDMLVVPPIENTPEEKGLKDRMAHA 180
DB 120 AVMATLLPFGQEFKITHQEMIKGIRKCTSGGYRYDDMLVVPPIENTPEEKDLKERMHA 179
QY 181 MNEYPDSCAVLVRHGVYVWGTEWKAETMCECYDYLFDIAVSMKKVGLDPSQLPVGNG 240
DB 180 MNEYPDSCAVLVRHGVYVWGTEWKAETMCECYDYLFDIAVSMKKMGLDPTQLPVGNG 239
QY 241 IV 242
DB 240 IV 241
RESULT 9
AAU78361
ID AAU78361 standard; protein; 241 AA.
AC AAU78361;
XX
XX
DT 18-JUN-2002 (first entry)
XX
DE Cell differentiation stimulator associated protein #2.
XX
KW Cartilage cell differentiation stimulator; osteopathic;
KW Membrane-bound transferrin-like protein; Mtf-BP; concanavalin A; ConA;
KW membrane bound type transferrin-like protein; Mtf; cartilage disorder;
KW bone metabolism disease; cell differentiation; cell growth;
KW extracellular matrix related disease; mouse.
XX
XX Mus sp.
XX
XX JP2002020311-A.
PN
XX
XX 23-JAN-2002.
XX
XX 07-JUL-2000; 2000JP-00206566.
XX
XX 07-JUL-2000; 2000JP-00206566.
PR
XX (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN.
PA
XX WPI; 2002-287405/33.
XX
XX N-PSDB; ABK12567.
XX
XX A cartilage cell differentiation stimulator useful in the diagnosis of

PT biophylaxis, cell differentiation, cell growth and construction of
PT extracellular matrix related diseases.
XX
PS Claim 2; Page 9-10; 17pp; Japanese.
XX
CC The invention describes a cartilage cell differentiation stimulator
CC (containing a membrane-bound transferrin-like protein (Mtf-BP) and a
CC membrane bound type transferrin-like protein (Mtf)) and an animal-derived
CC concanavalin-like drug. The cartilage differentiation stimulator can be
CC used in diagnosis, prevention and treatment of cartilage and bone
CC metabolism diseases. They can also be used for diagnosing biophylaxis,
CC cell differentiation, cell growth and construction of extracellular
CC matrix related diseases. Mtf-BP strongly stimulates differentiation of
CC cartilage cells and exhibits similar action mechanism with that of plant
CC derived ConA. This is the amino acid sequence of a cartilage cell
CC differentiation stimulator associated polypeptide described in the
XX invention
XX
SQ Sequence 241 AA;
Query Match 93.8%; Score 1239.5; DB 5; Length 241;
Best Local Similarity 93.8%; Pred. No. 4.1e-128;
Matches 227; Conservative 9; Mismatches 5; Indels 1; Gaps 1;
QY 1 MSGCDAGEGDCRRRCGAQDKHEPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAP 60
DB 1 MSGCQA-QGDCSRPCGAQDKHEPRFLIPELCKQFYHLGWVTGTGGGISLKHGNEIYIAP 59
QY 61 SGVQKRIQPEDMFVCDINEKDISGPSKSLKKSQCTPLFNNAYTMRGAGAVIHTHSA 120
DB 60 SGVQKRIQPEDMFVCDINEQDISGPPASKKLKKSQCTPLFNNAYTMRGAGAVIHTHSA 119
QY 121 AVMATLLPFGREFKITHQEMIKGIRKCTSGGYRYDDMLVVPPIENTPEEKGLKDRMAHA 180
DB 120 AVMATLLPFGQEFKITHQEMIKGIRKCTSGGYRYDDMLVVPPIENTPEEKDLKERMHA 179
QY 181 MNEYPDSCAVLVRHGVYVWGTEWKAETMCECYDYLFDIAVSMKKVGLDPSQLPVGNG 240
DB 180 MNEYPDSCAVLVRHGVYVWGTEWKAETMCECYDYLFDIAVSMKKMGLDPTQLPVGNG 239
QY 241 IV 242
DB 240 IV 241
RESULT 10
ADJ62656
ID ADJ62656 standard; protein; 241 AA.
XX
AC ADJ62656;
XX
XX
DT 06-MAY-2004 (first entry)
XX
DE Mouse rank-associated inhibitor (RAIN) protein SEQ ID NO:4.
XX
XX rank-associated inhibitor; RAIN protein;
KW osteoclast precursor cell fusion inhibitor; osteopathic; bone loss;
KW mouse; chromosome 2.
XX
XX Mus musculus.
XX
XX WO2004011620-A2.
XX
XX 05-FEB-2004.
XX
XX 29-JUL-2003; 2003WO-US023801.
PF
XX 29-JUL-2002; 2002US-0399205P.
PR
XX (TEXA) UNIV TEXAS SYSTEM.
XX
XX Darnay BG;
XX

DR WPI; 2004-143848/14.
DR N-PSDB; ADJ62655.
XX
PT New isolated Rank-Associated Inhibitor (RAIN) polypeptides, useful for
PT treating a subject with bone loss by inhibiting osteoclast precursor cell
PT fusion.
XX
XX
PS Claim 1; SEQ ID NO 4; 97pp; English.
XX
CC The present invention describes an isolated polypeptide containing at
CC least 10 contiguous amino acids of a rank-associated inhibitor (RAIN)
CC protein. Also described: (1) an isolated polynucleotide comprising a
CC nucleic acid encoding a RAIN polypeptide; (2) a method of treating a
CC subject with bone loss comprising inhibiting osteoclast precursor cell
CC fusion by administering a RAIN polypeptide to modulate RANK signaling, or
CC an expression vector comprising the polynucleotide under the
CC transcriptional control of a promoter; (3) a method for inhibiting
CC osteoclast precursor cell fusion by contacting an osteoclast precursor
CC cell with an expression vector that expresses a RAIN polypeptide; and (4)
CC a method for identifying a modulator of an osteoclast precursor fusion by
CC providing a cell deficient in a RAIN polypeptide; contacting the cell
CC with a candidate substance; and comparing osteoclast cell fusion observed
CC when the candidate substance is not added, where the alteration in
CC osteoclast cell fusion indicates that the candidate substance is a
CC modulator of an osteoclast cell fusion. RAIN sequences have osteopathic
CC activities, and can be used for inhibiting osteoclast precursor cell
CC fusion. The RAIN polypeptide, expression vector and methods are useful
CC for treating a subject with bone loss. The present sequence represents
CC mouse RAIN, which is used in the exemplification of the present
CC invention. The mouse RAIN gene is located on chromosome 2.
XX
XX Sequence 241 AA;
SQ

Query Match 93.8%; Score 1239.5; DB 8; Length 241;
Best Local Similarity 93.8%; Pred. No. 4.1e-128;
Matches 227; Conservative 9; Mismatches 5; Indels 1; Gaps 1;
QY 1 MSGCDAGEGDCSRRCGAQDKHPRLVLPCLCKQFYHLGWVTGGGSLKHGDEIYIAP 60
DB 1 MSGCQA-QGDCCSRPCGAQDKHPRLVLPCLCKQFYHLGWVTGGGSLKHGNEIYIAP 59
QY 61 SGVQKERIOPEDMFVCDINEKDISGSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSA 120
DB 60 SGVQKERIOPEDMFVCDINEQDISGPPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSA 119
QY 121 AVMATLLFPQEPFKITHQEMIKGIKKTSGGYRYDDMLVPIENTPBEKGLKDRMAHA 180
DB 120 AVMATLLFPQEPFKITHQEMIKGIKKTSGGYRYDDMLVPIENTPBEKOLKERNMAHA 179
QY 181 MNEYPDSCAVLVRHGVYVWGETWEKAKTWCCECYDYLFDIAVSMKKVGLDPSQLPVGENG 240
DB 180 MNEYPDSCAVLVRHGVYVWGETWEKAKTWCCECYDYLFDIAVSMKKVGLDPSQLPVGENG 239
QY 241 IV 242
DB 240 IV 241

RESULT 11
ID ABB65485
XX ABB65485 standard; protein; 227 AA.
AC
XX ABB65485;
XX
DT 26-MAR-2002 (first entry)
XX
DE Drosophila melanogaster polypeptide SEQ ID NO 23247.
XX
KW Drosophila; developmental biology; cell signalling; insecticide;
KW pharmaceutical.
XX
OS Drosophila melanogaster.
XX

PN WO200171042-A2.
XX
PD 27-SEP-2001.
XX
PF 23-MAR-2001; 2001WO-US009231.
XX
XX 23-MAR-2000; 2000US-0191637P.
PR 11-JUL-2000; 2000US-00614150.
XX
XX (PEKE) PE CORP NY.
PA
XX Venter JC, Adams M, Li PWD, Myers EW;
PI WPI; 2001-656860/75.
DR N-PSDB; ABL09588.
XX
XX New isolated nucleic acid detection reagent for detecting 1000 or more
XX genes from Drosophila and for elucidating cell signaling and cell-cell
XX interactions.
PS Disclosure; SEQ ID NO 23247; 21pp + Sequence Listing; English.
XX
XX The invention relates to an isolated nucleic acid detection reagent
XX capable of detecting 1000 or more genes from Drosophila. The invention is
XX useful in developmental biology and in elucidating cell signalling and
XX cell-cell interactions in higher eukaryotes for the development of
XX insecticides, therapeutics and pharmaceutical drugs. The invention
XX discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
XX sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-
XX ABB72072). The sequence data for this patent did not form part of the
XX printed specification, but was obtained in electronic format directly
XX from WIPO at ftp.wipo.int/pub/published_pct_sequences
XX
SQ Sequence 227 AA;
Query Match 59.8%; Score 790; DB 4; Length 227;
Best Local Similarity 70.3%; Pred. No. 2e-78;
Matches 149; Conservative 19; Mismatches 44; Indels 0; Gaps 0;
QY 22 EHPRLVLPCLCKQFYHLGWVTGGGSLKHGDEIYIAPSGVQKERIOPEDMFVCDINEK 81
DB 12 EHPRLVLPCLCKQFYHLGWVTGGGSLKHGDEIYIAPSGVQKERIOPEDMFVCDINEK 71
QY 82 DISGSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSAKAAVMATLLFPQEPFKITHQEMI 141
DB 72 DLQLPPEIKGLKKSQCTPLFMNAYTMRGAGAVIHTHSAKAAVMATLLFPQEPFKITHQEMI 131
QY 142 KGIKKCTSGGYRYDDMLVPIENTPBEKGLKDRMAHAMNEYPDSCAVLVRHGVYVWG 201
DB 132 KGIVYDEADKRYLYRDEELVPIENTPBEKGLKDRMAHAMNEYPDSCAVLVRHGVYVWG 191
QY 202 ETWEKAKTWCCECYDYLFDIAVSMKKVGLDPSQ 233
DB 192 QNWEKAKTWCCECYDYLFDIAVSMKKVGLDPSQ 223

RESULT 12
ID ABO55349
XX ABO55349 standard; protein; 64 AA.
AC ABO55349;
XX
XX 29-JUL-2004 (first entry)
XX
XX Human genome derived single exon protein #1583.
XX
XX Human; gene expression; single exon probe; microarray;
KW alternative splicing event; genomic alteration.
XX
XX Homo sapiens.
XX
XX US2003194704-A1.
PN XX

PD 16-OCT-2003.
XX 03-APR-2002; 2002US-00029386.
PF 03-APR-2002; 2002US-00029386.
XX (PENN/) PENN S G.
XX (RANK/) RANK D R.
PA (HANZ/) HANZEL D K.
XX Penn SG, Rank DR, Hanzel DK;
PI WPI; 2004-119264/12.
XX New human genome-derived single exon nucleic acid probes useful for human
DR gene expression analysis, for identifying or characterizing alternative
PT splicing events, for assessing genomic alterations or as tools for
PT surveying tissues.
XX Claim 45; SEQ ID NO 28983; 80pp; English.
XX The invention relates to a nucleic acid probe for measuring human gene
CC expression, comprising any of the 27,400 fully defined nucleotide
CC sequences in the specification, or their complements or fragments, and
CC encoding at least 8 amino acids of any of the 6888 amino acid sequences
CC fully defined in the specification. The probe is a single exon probe that
CC hybridises under high stringency conditions to a nucleic acid molecule
CC expressed in human cells or tissues. Also included are a spatially-
CC addressable set of single exon nucleic acid probes for measuring human
CC gene expression (comprising a plurality of single exon nucleic acid
CC probes cited above, where each of the plurality of probes is separately
CC and addressably isolatable or amplifiable from the plurality), a single
CC exon microarray for measuring human gene expression, a method of
CC measuring human gene expression, a vector comprising the single exon
CC probe cited above, an ORF-encoded peptide comprising at least 8
CC contiguous amino acids of any of the above-mentioned amino acid
CC sequences (optionally with conservative amino acid substitutions), an
CC isolated antibody that binds specifically to a peptide cited above,
CC methods of selling and/or licensing single exon probes or microarrays to
CC a customer desiring to measure gene expression, a method of providing
CC human gene expression data by subscription, and a computer-readable
CC storage medium which contains a database having a plurality of records
CC (each record including data on the expression of a single exon probe
CC cited above). The probe, methods and apparatus are useful in gene
CC expression analysis. The probes may be used as tools for surveying
CC tissues to detect the presence of expressed messages that contain their
CC specific exon, or in constructing genome-derived single exon microarrays.
CC In addition, the probes are used in identifying and characterising
CC alternative splicing events, in detecting and characterising gross
CC alterations in the genomic locus that includes their exon, in assessing
CC smaller genomic alterations, in priming the synthesis of nucleic acids,
CC or in expressing the ORF-encoded peptide. The present sequence is a human
CC single exon probe protein of the invention. Note: The sequence data for
CC this patent did not form part of the printed specification, but was
CC obtained in electronic format directly from USPTO at
CC seqdata.uspto.gov/sequence.html?DocID=20030194704
XX Sequence 64 AA;
SQ
Query Match 23.6%; Score 312; DB 8; Length 64;
Best Local Similarity 98.3%; Pred. No. 2.4e-26;
Matches 57; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 153 YRIDMLVPIENTPEEKLKDRMAHMANNEYPDSCAVLVRHGVVWGETWEKAKTM 210
DB 7 YRIDMLVPIENTPEEKLKDRMAHMANNEYPDSCAVLVRHGVVWGETWEKAKTM 64
RESULT 13
AAO10783
ID AAO10783 standard; protein; 129 AA.
XX
AC AAO10783;

XX 06-NOV-2001 (first entry)
DT Human polypeptide SEQ ID NO 24675.
DE
XX Human; cytokine; cell proliferation; cell differentiation; gene therapy;
KW vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
KW tissue growth factor; immunomodulatory; cancer; leukaemia;
KW nervous system disorders; arthritis; inflammation.
XX
OS Homo sapiens.
XX WO200164835-A2.
PN
XX 07-SEP-2001.
PD
XX 26-FEB-2001; 2001WO-US004927.
PF
XX 28-FEB-2000; 2000US-00515126.
PR
XX 18-MAY-2000; 2000US-00577409.
PR
XX (HYSE-) HYSEQ INC.
PA
XX Tang YT, Liu C, Drmanac RT;
PI WPI; 2001-514838/56.
XX N-PSDB; AAI90714.
DR
XX Isolated nucleic acids and polypeptides, useful for preventing diagnosing
PT and treating e.g. leukemia, inflammation and immune disorders.
PT
XX Claim 20; SEQ ID NO 24675; 1399pp + Sequence Listing; English.
XX The invention relates to human polynucleotides (AAI79941-AAI93841) and
CC the encoded proteins (AAO00010-AAO13910) that exhibit activity elating to
CC cytokine, cell proliferation or cell differentiation or which may induce
CC production of other cytokines in other cell populations. The
CC polynucleotides and polypeptides are useful in gene therapy, vaccines or
CC peptide therapy. The polypeptides have various cytokine-like activities,
CC e.g. stem cell growth factor activity, haematopoiesis regulating
CC activity, tissue growth factor activity, immunomodulatory activity and
CC activin/inhibin activity and may be useful in the diagnosis and/or
CC treatment of cancer, leukaemia, nervous system disorders, arthritis and
CC inflammation. Note: The sequence data for this patent did not form part
CC of the printed specification, but was obtained in electronic format
CC directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
XX Sequence 129 AA;
SQ
Query Match 20.7%; Score 273.5; DB 4; Length 129;
Best Local Similarity 49.1%; Pred. No. 1.2e-21;
Matches 54; Conservative 3; Mismatches 6; Indels 47; Gaps 1;
QY 1 MSGCDAGRGDCCSRRCGAG-----
DB 20 MSGCNARKGDCCSRRCGSHLXNIFDNLXNFFITSAKVECFKBSIYSQTVVXSPG 79
QY 20 -----DKEHPRYLIPELCKQFYHLGWVTGGTGGGSLKHGDBIYIAPSGV 63
DB 80 XQMTXDKHEPRYLIPXLCIQFYHLGWVTGGTGGGIIILKHGDBIYIAPSGV 129
RESULT 14
AAG74374
ID AAG74374 standard; protein; 59 AA.
XX
AC AAG74374;
XX
XX 03-SEP-2001 (first entry)
DT
XX Human colon cancer antigen protein SEQ ID NO:5138.
DE
XX Human; colon cancer; colon cancer antigen; diagnosis; detection;
KW

Db 176 DSFDAKRELEAYEFLQPHIKLLSI 200

Search completed: February 1, 2005, 14:26:03
Job time : 170 secs